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AUTHOR Applbaum, Ronald L.
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ABSTRACT

Because research in speech communication is predominantly the study of human behavior, a major goal of researchers in the field is to provide sound communication propositions about people in general or specific groups of people. A review of recent speech communication research reported in journals reveals that researchers in the social and behavioral sciences have not always exercised critical professional judgment in the selection process of their subjects. A survey of 100 university and college departments of speech communication regarding the sources and procedures for obtaining and using subjects in speech communication research suggests that most research in speech communication continues to be carried out with the use of college students. Recommendations for improving the selection process include having the researcher decide on an adequate definition of the population to which he is interested in generalizing, determine the degree to which the particular sample is potentially different from the population of interest, and then identify possible generalization constraints. Also, departments need to establish clear procedures for both selecting and debriefing subjects. It is the responsibility of journal editors, associate editors, and reviewers to require proper use of sampling procedures and the reporting of sufficient detail regarding subjects to validate the general ability of research results. (DF)

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SUBJECT SELECTION IN SPEECH COMMUNICATION RESEARCH: A RE-EXAMINATION

DR. RONALD L. APPLBAUM

PH.D. - PENNSYLVANIA STATE UNIVERSITY

VICE PRESIDENT FOR ACADEMIC AFFAIRS
PROFESSOR OF COMMUNICATIONS

PAN AMERICAN UNIVERSITY

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Subject Selection In Speech Communication Research: A Reexamination

Ronald L. Applbaum

The purpose of the article is to: (1) identify the type of subjects used in published speech communication research over the last decade, (2) report the results of a survey of departments to determine present practices and policies regarding the use of subjects and (3) compare past and present subject selection practices. The review and survey indicate that, although a greater use of subjects from outside colleges has occurred, speech communication researchers continue to use college students as their primary source of subjects. Published articles generally do not report information needed for the replication and certification of findings.

Ronald L. Applbaum (Ph.D., Pennsylvania State University, 1969) is Vice President for Academic Affairs at Pan American University, Edinburg, Texas 78539.

Key Concepts: Subject selection, research methods, subject, recruitment of subjects, deception, debriefing, validity, generalizability.

Research in speech communication is predominately the study of human behavior. Thus, a major goal of researchers in the field is to provide sound communication propositions about people in general or about specific groups of people (children, women, ethnic groups, etc.). Since the communication researcher typically tries to understand a population on the basis of a sample, the selection of subjects becomes vitally important. It has been said that no decision is more important in research than the proper selection of subjects.

Like all researchers concerned with the study of human behavior, we must ask two questions prior to selecting our subjects: (1) Are the subjects representative? and (2) are the subjects appropriate for answering the research question?

Since researchers rarely are able to test an entire population, the subjects in the sample must be representative of the population; they must "look something like" the population. It is normally expected that the behavioral results from a group of subjects correspond to results obtained if the entire population from which the sample has been drawn had been tested. The degree of correspondence between sample results and population results, if such data could be gathered, would provide a direct measure of the sample's generalizability and validity of the communication propositions drawn from this sample. Subjects in a sample must be representative of the population if the results are to be generalized to that population. Furthermore, true replicability, a cornerstone of the scientific method, is a possibility only if the samples drawn across studies are similar in composition.

Researchers must also be certain that their subjects are appropriate for providing the information related to the construct being studied. For example, most research questions are designed to answer questions about a general population group, for example, children, young adults, or women. However, a specific sample, for example, women, if restricted to female college sophomores, may not be appropriate. Such a sample may not provide results that are generalizable beyond the sample population, college sophomores, because there exists variability in the measurement of the construct across restricted groups within the larger population. Thus, the validity of propositions regarding the population's communication behaviors drawn from such samples are highly suspect.

Despite the importance of subject selection in research involving human behavior, it is clear that researchers in the social and behavioral sciences have not always exercised critical professional judgment in the actual selection process. Almost four decades ago, Quinn McNemar (1946) stated that research on human behavior was becoming " a science of the behavior of sophomores." He feared that human behavior might not be indicative of behavior in the general population. If the results of such research reflected only the behaviors of a select college sample population, the normal generalizability of the data would be jeopardized and severely limited. Rosenthal and Rosnow (1969, p. 110) suggested that we don't even have a science of college sophomores, but "a science of just those sophomores who volunteer to participate in research and who also keep their appointment with the investigator." Two decades later a survey of published social science research noted that over 80 percent of the studies examined were still employing only college students as subjects (Schultz, 1969).

Thompson (1967, p. 212) in a survey of speech literature, referred to numerous instances of findings based upon improper samples. Charles Rossiter (1976) in a survey of 68 published communication experiments found that 75 percent of the subjects were college students. And, Applbaum and Phillips (1977), in a survey of over 600 articles published from 1960 to 1974 discovered that 77 percent of those studies used only college students as subjects, and of this total, 50 percent of the subjects were drawn from introductory speech communication classes.

We do know that the college population from which college subjects are drawn differs substantially from the non-college population in age and intelligence. Furthermore, college students have different patterns of attitudes, values and interests than the general population (Jung, 1969). Recently, Gorcyca, Kennan and Stech (1979) posed additional questions regarding the validity of using the verbal behavior of college students as reflective of larger population groupings. They concluded that communication research on college freshmen and sophomores is "only partially indicative of the behavior potential of other age groupings." If improper sampling is occurring, then, as Miller (1970, p. 82) has suggested, "these procedures, in turn, give rise to numerous thorny questions about the extent to which findings obtained. . . can be generalized beyond the parent population from which the subjects were drawn.

Rossiter (1976, p. 198) noted that both the nature of the subject sample and the experiment as a social situation could threaten the validity of communication experiments using human subjects. Many researchers have for too long and too naively presumed that the random assignment of subjects to predetermined treatment conditions would actually control all pre-experimental differences and the influences of extraneous variables.

Subjects will respond to all research situations. Harre and Secord note that humans are conscious of their behavior and can modify that behavior to coincide with their own goals (Harre and Secord, 1972). Since subjects respond to the context in which studies take place, their behavior may reflect a response to their own behavior as much as the effect of variables being manipulated in treatment conditions. Krause (1970) argues that in an experimental context the behavior of subjects is a general response to a novel situation. Subjects respond as they perceive the situation. And, subjects can perceive the same situation in different ways. Rossiter (1976) suggests that it is reasonable to assume that subjects will respond to a research situation in terms of their past experiences in similar situations. Furthermore, the subjects' attitudes toward research in general, their experience with previous research projects and the extent of their participation in research activities can all influence the behaviors of subjects (Adar and Fenton, 1971; Holmes, 1967; Holmes and Applbaum, 1970).

This article will examines the subject selection process in speech communication research. The purpose of the article is to: (1) identify the type of subjects used in published speech communication research over the last decade, (2) report the results of a survey of departments to determine present practices and policies regarding the use of subjects in speech communication research, (3) compare the past and present selection practices of subjects in speech communication research, and (4) recommend methods and practices for dealing with generality problems in speech communication research.

REVIEW OF SPEECH COMMUNICATION JOURNAL RESEARCH

All research using human subjects published from July, 1975 through July, 1984 in Communication Monographs, Communication Education, Quarterly Journal of Speech, Human Communication Research, Southern Speech Communication Journal, Communication Quarterly, Journal of Communication, Western Speech Communication Journal and Central States Speech Journal was examined for the type and method of subject selection and handling. A total of 640 articles were reviewed. The subjects were classified into one of 9 population categories: (1) Students-Introductory Speech Communication Courses, (2) Students-Other College Courses, (3) Adults-General, (4) Adults-Special, (5) Children-Pre-School, (6) Children-Grades K-8, (7) Children-Grades 9-12, (8) Children-Non-School Setting, (9) Children-Across Grade Levels K-12.

Table 1 illustrates the types of subjects used in speech communication research over the ten- year period surveyed. The research reviewed was conducted primarily with college age subjects (65.5 percent). Students in introductory courses constituted 51.3 percent of the samples. Subjects drawn from adult populations comprised 23.6 percent of the samples and 10.9 percent of the samples were composed of pre-college age children.

Only 31.7 percent of the studies reported the gender of the sample subjects; 26.7 percent reported the actual number of male and female subjects utilized in the samples. The subjects' ethnicity was reported in only 32 (4.7 percent) of the studies.

Only 54.7 percent of the articles reviewed reported the method(s) used for selecting or recruiting subjects. In studies reporting the recruitment method(s), 15.9 percent of the researchers acquired their subjects as part of a course requirement. However, of the studies using a

sample group of subjects required to participate, 4.3 percent of those studies noted that the students were given an opportunity to volunteer for that particular study.

Although the majority of studies do not appear to use deception as an element in the research process, it does appear that 42.7 percent of the studies required that subjects not be fully informed as to the purpose of the study prior to conducting the research. Only 18.4 percent of the researchers in the studies using deception reported debriefing their subjects. And, only 8.9 percent of the studies report having questioned the subjects following the study as to the presence of bias or demand characteristics.

SURVEY OF SUBJECT SELECTION IN SPEECH COMMUNICATION DEPARTMENTS

This section describes the results of a survey of 100 University and College departments of speech communication regarding the sources and procedures for obtaining and using subjects in speech communication research. All departments granting a doctorate in speech communication were included in the survey. The survey also included the 25 highest ranking departments in research/publication activity in the speech communication field (McCallum, 1984). The survey questionnaire was sent in February of 1984 to 100 departments; 68 departments responded.

Departments were first asked to estimate the source and sex of subjects used in department faculty and graduate student research during the past year. The respondents indicated that they were, with the exception of ten departments, using proportionally the same number of male and female subjects. In two cases, respondents noted that the lack of balance was intentional and the result of the nature of the research question. The respondents also indicated that subjects in the majority of studies were

drawn from introductory speech communication courses. Twenty-five departments estimated that over 50% of their subjects were drawn from basic courses. Table 2 provides the source of subjects for departmental research.

Second, the survey examined five primary methods for recruiting subjects: (1) course requirement in which participation is an explicit part of the course; (2) course option in which the subject has an option of participating in the research project or some other class-related activity, e.g., preparing a term paper; (3) student participation as a source of extra credit; (4) participating voluntarily without reward or payment; and (5) payment for participation in the research project. Table 3 shows how frequently each method was used by the responding departments. Every department, except two, reported the use of a variety of recruitment methods.

Third, the survey explored a series of ethical issues involving the use of human subjects. Sixty-one (89.7%) of all institutions have a group and/or individual who previews studies using human subjects prior to their administration. Fifty-four (82.3%) of the respondents had university and/or departmental review committees determining the ethical soundness of proposed research activities. Table 4 lists the person(s) responsible for determining the ethical soundness of a proposed research project. Sixty-five (95.6%) of the institutions reported that subjects are informed that they may refuse to participate in a research project they find objectionable. And, thirty-six (52.9%) of the institutions required subjects to sign informed consent forms prior to participating in the research project. Eight (11.8%) and thirty-three (48.5%) of the institutions, respectively, reported always or frequently asking subjects in studies

their perceptions of the research activity following participation in the study. Furthermore, when deception was part of the research project, fifty-eight (85.3%) of the institutions reported that subjects were debriefed.

DISCUSSION

The review of the literature and survey indicate that most research in speech communication continues to be carried out with the use of college students. Neale and Liebert (1980, p. 245) state that "Evidence is accumulating rapidly to suggest that many characteristics of college populations may interact with the treatments given them and thus sharply limit the generality of many conclusions." The college student in many institutional cases is actually a restricted sample of the total college population and, thus, further restricting the generality of any conclusions arrived at by otherwise proper research methods. The sample group drawn from a freshman class in a selective admissions school and one with an open admissions policy will not be similar, particularly in areas commonly examined by communication researchers such as values or attitudes. Both the survey and literature review indicate an increased use of subjects from outside the college environment over the last ten years. While the accessibility of college students for use in research projects has probably lead to their extensive use, researchers must be certain that subjects in the sample possess the characteristics of the population being examined.

We continue to rarely report either the sex of subjects or the number of subjects by gender in our literature. Articles that did report the number of subjects by gender, except when examining only subjects of a particular sex, appeared to have a balance of male and female subjects.

The failure to report the gender of subjects is a common phenomenon in social and behavioral science literature. The survey respondents also indicated using proportionally the same number of male and female subjects in their research.

Sex differences may be a more critical variable in communication research than we believe. Carlson (1971), in review of personality research, states that among studies that could have tested for sex differences less than half reported such tests. Yet, in those studies where sex differences were examined, significant effects of sex were found in 74 percent of the studies. We need to be more sensitive to the use of sex as a classificationary variable in our research designs.

It is difficult to ascertain the exact method used for selecting subjects from published articles. The majority of articles provide no information regarding selection procedure. The survey did indicate that a variety of recruitment methods are utilized. It is perhaps noteworthy that the number of institutions requiring student participation and paying for participation has decreased over the last decade. On the other hand, the number of subjects participating gratis has increased. Although the requirement for research participation has decreased the basic course continues to have a "research component" associated with it. Students can use research participation as a course option or for extra credit. This course option helps to generate a subjects pool. In such cases one must question whether the subjects can accurately be labeled as volunteers. And, in the case of such volunteers, it is possible that the demonstrated effects of a particular variable or association between variables holds only for the sample possessing the special characteristics of volunteers.

In 1973 the American Psychological Association adopted a set of ten ethical principles. Two principles in particular focused upon the information communicated to subjects before and after the research project. Principle 3 suggests that subjects be given full disclosure about the details of the research so that they can make an informed decision regarding their willingness to participate in the project. The nature of most communication research requires that subjects not be fully informed about the details until after the measurements or observations have been concluded. Principle 4 recommends that those studies in which subjects have been deceived or not fully informed be given complete information at the conclusion of the study. Subjects are to be debriefed, providing each participant with the reasons for the deception (American Psychological Association, 1973).

The literature review also suggests that researchers rarely examine the subject's perceptions of the research project. Demand characteristics and other role selection problems can be a serious challenge to the validity of any study. One method to determine if such a problem exists is to interview the subjects to determine whether they have addressed certain experimental hypothesis and reacted so as to assist the researcher in obtaining the desired results. Unfortunately, as Orne (1973) notes, some subjects and experimenters do not "dig very deeply" during such interviews for fear that either they will be disqualified as subjects or the researcher will have to run another subject.

To alleviate the sampling problems identified in this study, I also would recommend the following:

First, in order to deal effectively with the problem of generalizing from a particular sample, the researcher must take two steps: (1) decide

on an adequate definition of the population to which he or she is interested in generalizing and (2) determine the degree to which the particular sample is potentially different from the population of interest and, thus, identify possible generalization constraints. As the difference between sample and population increases, the validity of applying communication propositions across the population decreases. Neale and Subert (1980, p. 247) suggest that "the best solution to the problem of population generalization is to define and randomly sample directly from the population of ultimate interest, employing mixed designs to include experimental variables of particular theoretical and practical significance." This solution also provides a consistent method for replicating the research.

Second, researchers want to conduct research that is ethically responsible in regard to the rights of subjects without distorting the research results. Each department needs to establish clear procedures for both selecting and debriefing subjects. Gardner has recommended that department administration should not use one set of procedures for all research projects. Departments should use the old-type procedures for studies lacking risk, as determined by an institutional review body, and procedures incorporating all the elements of informed consent when risk is present in the project (Gardner, 1978).

Third, I support Rossiter's (1976) recommendation that we attempt to understand threats to the validity of our research and how these threats operate specifically in communication studies. Communication scholars tend to rely on social psychological research to build theory about human communication. Yet, the organization and conduct of research by communication researchers and social psychologists often differs significantly.

Fourth, Schultz (1969, p. 227) asserted years ago that researchers must "adapt a more realistic image of the human subject--one that reflects and incorporates both the newer thinking in philosophy of science and the results of our own research on research." In the decade between my two studies, the research practices as reported in our literature have changed minimally. Research articles continue to be plagued with an absence of detail regarding the selection and use of subjects. Replication and validation of project findings are cornerstones of the scientific method. Yet, neither process can be undertaken or examined based on the information normally found in our journal articles. It is the responsibility of journal editors, associate editors and reviewers to require the use of proper sampling procedures and the reporting of sufficient detail regarding the subjects to validate the generability of the research results.

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	TYPES OF SUBJECTS								
	COLLEGE STUDENTS		ADULTS		CHILDREN				
AREAS	INTRO SPEECH COURSES	OTHER COLLEGE	SPECIAL ADULT	GENERAL ADULT	PRE-K	GRADES K-8	GRADES 9-12	ACROSS GRADES/ AGES	TOTAL
ALL GROUP	35	14	1	1	0	0	0	2	53
NTERPERSONAL	166	41	27	28	1	11	4	4	282
PERSUASION & UBLIC SPEAKING	75	16	2	3	0	2	2	3	103
INTRAPERSONAL & LANGUAGE	29	4	0	3	0	3	0	1	40
MASS OMMUNICATION	14	10	6	30	4	11	2	9	86
RGANIZATIONAL OMMUNICATION	3	4	19	19	0	0	0	1	46
SPEECH EDUCATION	25	8	16	5	0	7	3	4	68
	347	97	71	89	5	34	11	24	678

Table 1. Subject Selection As Reported in 640 Journal Article, 1975 - 1984

TABLE 2

SOURCES FOR HUMAN SUBJECTS*

PERCENTAGE USE OF A SUBJECT SOURCE

SUBJECT SOURCE	0-10		11-50		51-100	
Year	74	84	74	84	74	84
Intro, Speech Courses	1	4	14	13	26	25
Other Speech Courses	6	11	11	17	0	4
Non Speech Courses	10	23	6	7	1	0
Special Adult Groups	11	22	7	4	1	0
K - 12	9	20	0	4	0	3
General Population	5	22	11	6	0	0

*Numbers in table refer to departments using a particular subject source

TABLE 3

METHODS FOR OBTAINING SUBJECTS

Method	Number of Schools Using Each Method	
Required Basis	Year 1974	1984
Course Requirement	20	13
Course Option	19	20
Extra Course Grade	10	22
Noncompulsory Basis		
Gratis	37	46
Paid	11	3

TABLE 4

EVALUATING ETHICAL SOUNDNESS

OF RESEARCH PROJECT

Department Review Committee	8
University Review Committee	24
University and Department Review	24
Research Investigator	8
Graduate/Research Coordinator	2